

Muhammad Fizan

2A

201900059

## \* Insertionsort

Step 0 

25	7	9	13	3
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Step 1 

7	25	9	13	3
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Step 2 

7	9	25	13	3
---	---	----	----	---

Step 3 

7	9	13	25	3
---	---	----	----	---

Step 4 

3	7	9	13	25
---	---	---	----	----

## \* Bubble sort

25	7	9	13	3
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j = 1

j = 4

25	7	9	13	3
25	7	9	3	13
25	7	3	9	13
25	3	7	9	13

j = 3

j = 2

j = 1

i = 2

j = 3

j = 2

j = 1

3	25	7	9	13
3	25	7	9	13
3	25	7	9	13

$i = 3$      $j = 2$   
 $j = 1$

2	7	25	9	13
3	7	25	9	13

$i = 9$      $j = 9$

3	7	9	25	13
---	---	---	----	----

After

8	7	9	13	25
---	---	---	----	----

### \* Selectionsort

25	7	9	13	3
----	---	---	----	---

3	7	9	13	25
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3	7	9	13	25
---	---	---	----	----

3	7	9	13	25
---	---	---	----	----

3	7	9	13	25
---	---	---	----	----

### \* Shellsort

$$n = 5$$

$$j_{\text{last}} = 5/2 = 2$$

25	7	9	13	3
----	---	---	----	---

3	7	9	13	25
---	---	---	----	----

$$j_{\text{last}} = 2/2 = 1$$

25	7	9	13	3
----	---	---	----	---

3	7	9	13	25
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IR/ML Test & Information  
L. Jelstam

Sorting and Searching

Step 0	15	7	9	13	2
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Step 1	7	25	9	13	3
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Step 2	7	9	25	13	3
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Step 3	7	9	13	25	3
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Step 4	3	7	9	13	25
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→ length = 5

Call =  $\text{arr}^i$

$i = 0;$      $D = 5 \rightarrow T$   
 $\text{arr} \Rightarrow \text{A}[0] \Rightarrow 15 \Rightarrow 3 \rightarrow \text{false} (\text{else})$

$i + 1;$      $i = 0 + 1 = 1;$      $1 < 5 \rightarrow T$   
 $\text{arr} \Rightarrow \text{A}[1] \Rightarrow 7 \rightarrow \text{true} (\text{and})$

$i + 1;$      $i = 1 + 1 = 2;$      $2 < 5 \rightarrow T$   
 $\text{arr} \Rightarrow \text{A}[2] \Rightarrow 9 \Rightarrow 9 \rightarrow \text{false} (\text{else})$

$i + 1;$      $i = 2 + 1 = 3;$      $3 < 5 \rightarrow T$   
 $\text{arr} \Rightarrow \text{A}[3] \Rightarrow 13 \Rightarrow 13 \rightarrow \text{true} (\text{Data checked})$